Texas Navy off Yucatan

E. M. Schiwetz

The HUMBLE WAY

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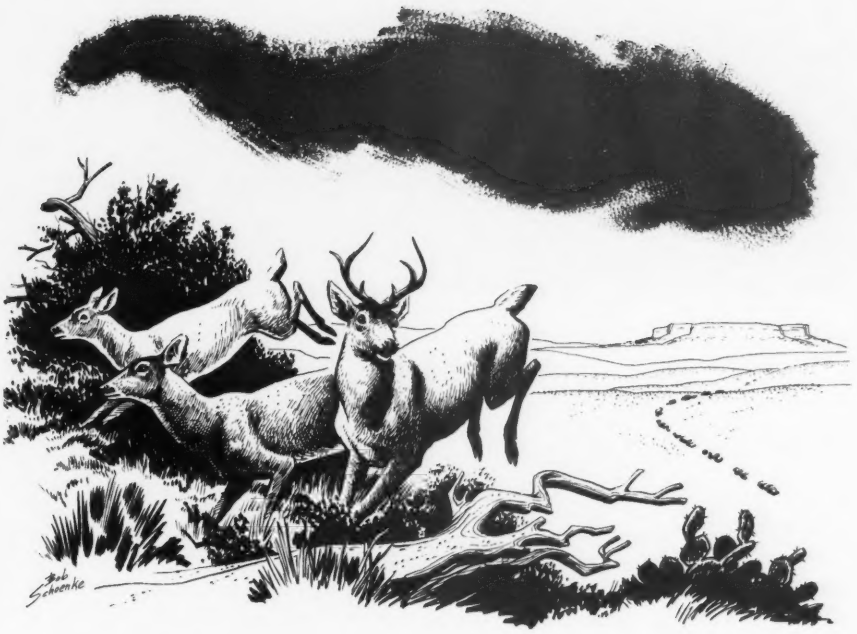


OIL COUNTRY SAFARI

A THIN column of dust, wavering in the late afternoon heat, moved steadily across the empty plain. A pack of javelinas—wild pigs—sensed an intrusion, for they lifted their ugly snouts briefly; then snorted away through the brush. A few scattered cattle stared curiously.

Gradually, the dust came nearer; and from it, finally, emerged a long, mud-and-dust-spattered caravan of vehicles, each towing its own trailer.

It was an odd looking safari—automobiles, and jeeps, and carry-alls, and small trucks loaded with strange equipment. Behind them were water tanks, generators, and straight-sided cook wagon and bunk houses. And wrestling them along were sun-tanned men with shiny helmets pushed far back on their heads to scoop up the hot, dry breeze.

As the safari rolled onward past a shallow lake, clouds of geese swirled in the air, honking their protest; and a buck and three does peered intently from their watering place before leaping away through the underbrush.

At length the column slowed, and turning onto a grassy clearing, wheeled into a circle like a wagon train of old. The men busied themselves about the trailers, and soon lights were burning in the dusk, and the smell of roasting meat and boiling coffee scented the air. A game of horseshoes started as the camp settled down, for tonight was relaxed; but *tomorrow*—tomorrow the hunt, the shooting, would begin.

But the men of this safari were not hunting the game they had seen, nor were they exploring "darkest Africa." Yet they were both hunters and explorers; explorers of our own United States, and hunters of the most elusive "big game" of all—the undiscovered oil deep within the earth. For these men formed an *"oil-country* safari," one of the far-ranging seismograph crews which help carry on the constant search for oil. And their "shooting"—exploding charges in holes drilled in the earth—bags nothing but information, setting up shock waves to reflect

Humble well in California. For some timely information on the financial hazards of exploring for oil, see Page 6.

Rolling through Southwest Texas, Humble Seismograph Party No. 6 bears a striking resemblance to a safari in "darkest Africa." This crew forms Humble's longest "oil country safari," taking trailer homes with them into the remote ranches they explore.

geologic patterns from horizons far below.

Yet "safari" is a suitable name for seismograph crews, for the search for oil may take them anywhere on the map, no matter how rough, rugged, or remote. Thus it is that they are often explorers of territory as well as explorers for oil. And they find there is still adventure in exploring, even in our civilized country, for areas remain where few men have set foot before them.

Take the Humble Seismograph Party No. 6, described above, for example. This crew forms Humble's "longest safari," for unlike other Company land crews, they take their trailer homes with them in the remote areas of the hugh Southwest Texas ranches they explore.

"Most everywhere we go is where few other people have been," says Party Chief A. G. Starr, "and back in the sand dunes around the bays we're a 'fer piece from taw.' " The seismic operator, surveying the lonely reaches of open range, adds, with dry humor, "There's just us and the good Lord and the rattlesnakes out here." And their statements are almost literally true, for the crew sometimes goes for weeks without so much as seeing a single ranch hand. But rattlesnakes they see all too often.

EDITOR'S NOTE: This is the second of three articles about interesting experiences of explorers for oil—gravity meter crews, seismograph crews, and surface geologists. The first story of the series told of gravity meter crews; this article takes up the "adventures" of seismograph parties. A later article will relate experiences of surface geologists.

Snakes, indeed, are their worst problem. "Rattlesnakes have caused our closest shaves," says the party chief. "In the weeds which spring up after a rain, you can almost step on a snake without seeing him. Still, we've never had to use our snake-bite kits yet."

Perhaps this is because of a deadly snake-killer the men have developed. The crew never carries firearms, but they kill one or two big rattlesnakes every day without danger to themselves. Their special weapon resembles a whip—simply a round handle with a piece of cotton rope attached with a length of chain at the end. Slammed across a coiled and weaving rattlesnake, the chain will break the snake's back in half a dozen places. "But the longer the piece of rope is, the better I like it," declares one crew member.

Getting lost is another problem, for the open range has a great sameness about it. Like other land crews, Party No. 6 follows roads as far as possible and then gets into the area to be "shot" the best way it can. Trucks with light rigs for drilling shot holes, the explosive truck with its canned charges, the shooting truck with its load of seismograph instruments, the reel truck with its long cables and "listening" devices—all plunge into open country. And after several hours of maneuvering and "shooting" in brush or sand dunes, directions often become confused.

For this reason, the crew is never without its compasses. Sudden storms may spring up, but with rolling homes

Scientific caravans exploring our United States still find plenty of adventurous territory

nearby, and a compass to guide the way, shelter is never more than minutes away.

But Party No. 6 is not confined to land—it is also equipped to operate in the tidal area between land and sea. And on one occasion it came to the aid of the U. S. Navy!

Lying on the mud flats of the coastal area where the crew was working was the old wreck of a Navy airplane, the pilots long since rescued. But flyers passing overhead often reported the only slightly damaged hull as a new wreck, precipitating a fresh air-sea search-and-rescue operation each time. As the reports kept coming in, the Navy tried to reach the wreck to destroy it. But the mud-flats—sometimes under water, sometimes not—defied both boat, vehicle, and manpower. So the Navy, hearing of the Humble crew, requested assistance. And mounting a slat-wheeled buggy—a high-wheeled vehicle for traveling on mud, sand, or shallow water—crewmen rolled to the scene, and in a flash of explosives the "plane down" reports were put to an end.

This incident is but one illustration of the "frontier spirit" of helpfulness of oil exploration people. Like most outdoorsmen, they are always ready and willing to come to the aid of anyone in need. And their training fits them for the role. Another Navy airship crash—this time a serious one—provides a good example.

Planes from a nearby air base frequently buzz through the air over Party No. 6. And when a rending crash split the stillness of a quiet afternoon, J. T. Kitchens, seismic operator who happened to be nearby, knew what it meant. Locating the scene, he pulled two unconscious flyers from the wreck, one bleeding profusely from a cut throat. By applying a compress to the wound—a technique learned in a Company first-aid course—Kitchens was able to rush the men to a hospital in time for medical aid to be effective.

These are some of the adventures shared by the 24 men in Party No. 6. On weekends they join their families and friends at their homes in Kingsville, but the first of each week brings them back to camp, wherever it may be. Each dawn finds them exploring a new location, and finding new experiences in each one.

And frequently, the men hook onto their trailers and the "longest safari" moves on—onward to a new area, carrying forward the search for oil.

But sometimes the search becomes a race—a hotly competitive race in which seismograph crews play a vital part with "hot shot" jobs and fast, long distance moves.

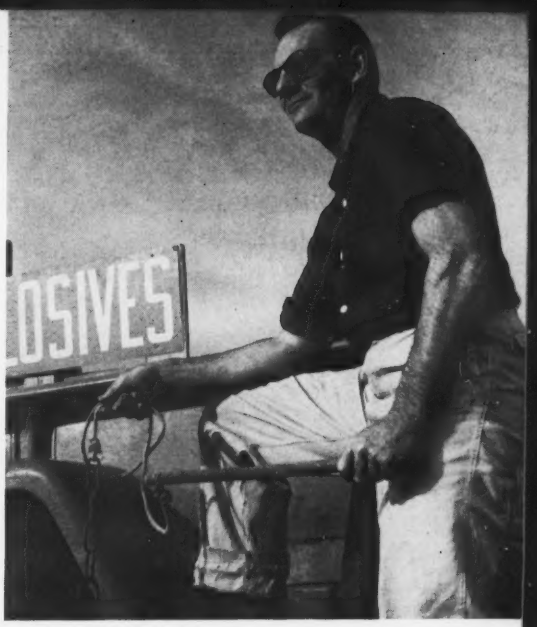
Suppose, for instance, the University of Texas offers a large block of school land in West Texas for oil-lease bids. Since University land is put up for bid only upon request, Humble exploration people immediately know two things: (1) someone has already explored the land, and (2) they found something interesting.

To be in a position to bid on the tracts, or perhaps decide to pass up the lease, Humble needs specific geologic information on the land in a hurry. One way of getting this information is to send in a seismograph crew.

The nearest Humble shooting crew is working on a routine survey 150 miles to the south. Suddenly comes an emergency telephone order from Houston: get rolling to the north. In one month bids must be submitted; cover the whole area in less.

Now the race is on in earnest, and the "safari" moves light and fast. Three swift weeks later, the hot-shot job is done, and the information is in.

But in one location, seismograph crews often move agonizingly slow—the dank swamps of Louisiana and other Gulf Coast states. The average



Deadly weapon for killing rattlesnakes is shown by seismic operator of Party 6.

On land, seismograph crews follow roads as far as possible, then plunge into open country, as shown by instrument truck.

In swamps, parties use bayous as substitutes for roads, but must depend on sheer manpower to penetrate jungle-like growth.

Column of heavy-laden men forms "oil country safari" in swamps, hacking a trail through undergrowth, wading muck, balancing over logs across lily-choked bayous.

land crew "shoots" 12-14 holes a day; in one unusually difficult Louisiana swamp area a crew struggled *three weeks* to shoot the same number.

The reason: despite all the seismograph crews' specialized transportation, no vehicle has yet been invented to penetrate the jungle-like growth of the swamps. Here the "safari" is a column of heavy-laden men, hacking their way through tangled vines, struggling through hip-deep muck, balancing over logs across lily-choked bayous.

True, the crews follow waterways in boats as far as possible, like land crews following roads. But you cannot explore swamps from the bayous, and upon leaving the boats, everything—explosives, instruments, heavy batteries, cables and geophones, drilling equipment—*everything* moves by sheer manpower. But it doesn't last long.

"We work in the swamps only between November and February, when the marshes are closed for the trapping season," explains the chief of Party No. 10, a typical swamp exploration crew. "The men like the swamps better during winter, too—it's not so hot and still, and the undergrowth is not so heavy."

The tangled undergrowth—not muck and water—is actually the big problem in most swamps, a crewman declares. For contrary to popular opinion, water does not stand everywhere in swamps. Usually, there is considerable firm ground, and sometimes crewmen have to dig "seep holes" to get water for drilling.

But in penetrating this undergrowth the crew is *really* exploring, particularly the engineers. For in surveying a "shot line," the engineers blaze a trail where no trail has ever been made before. Often, swinging their sharp machetes, they must hack a narrow pathway through almost-solid vegetation, or "cut a crossing" by felling trees to form a bayou bridge for the men bearing equipment. Surprisingly, however, they see little wildlife in most swamps and are hardly bothered by insects.

Emerging from their work at eventide, wet and tired, the men return to their comfortable, TV-equipped houseboat nearby—quite a contrast to their daylight suroundings. Usually the crew remains in the swamps for 10 days, with four days off, but in some hard-to-reach areas crews have stayed with their work up to 28 days at a stretch.

But with the coming of spring, the men are glad to leave the swamp in favor of "alligator country"—the marshes.

Seismograph men exploring swamps pause often for a cooling drink from canteens.

HUMBLE SEISMOGRAPH PARTIES

Obviously, a story such as the one on these pages can only hint at the many "adventures" of the various Humble seismograph crews. But simply listing the parties not mentioned above, along with locations where they are working, will give some idea of the wide range of their activities.

Shooting in West Texas are Party No. 13, under Party Chief E. W. Hunt; J. B. Hamilton's Party No. 18; and T. H. Holland's Party No. 23.

In East Texas are E. E. Brown's Party No. 16 and S. B. Holland's Party No. 18. Operating in North Texas is J. R. McMahan's Party No. 22; and in the Texas Gulf Coast is C. K. Fielder's Party No. 14.

Exploring Louisiana are R. A. Lowery and Party No. 9; Ross Smith, Jr., and Party 10; B. M. Sellers' Party No. 21; and C. A. Salassi's Party No. 17.

Further afield in Company operations are R. S. Esperson and Party No. 8, in New Mexico; B. M. Crow's Party 15 and Ray Thomas' Party 27, both in Florida; and P. H. Thomas and Party 26, in California.

Exploring in the open Gulf are Claude Sonnier and Party 28, off the coast of Louisiana; and Acting Party Chief A. J. Craig and Party No. 25, off the Texas coast.

In addition, a number of contract crews are working for the Company in various locations.

"Lots of people ask about the difference between swamp and marsh," the operator remarks. "There are no trees in the marshes—only tall grass. But I tell them the real difference is 'work' and 'no work,' " he laughs. So far as seismograph work is concerned, his definition is almost correct. For in marshes the men *ride*—on marsh buggies and sometimes even in helicopters—and shoot almost as many holes per day as a land crew.

And the alligators? "You leave them alone and they'll leave you alone," is the prudent attitude of most crewmen from dry-land locations. But to some of the natives on the crew—the storied "Cajuns," much respected for their knowledge of swamp and marsh—an alligator means nothing but a hide worth a fancy price. And in their spare moments, where the law permits, they take 'em instead of leaving 'em alone. The usual weapon is a hammer or wrench, applied between the eyes from behind the toothy jaws.

Members of Party No. 10 tell of one crewman who, finding a " 'gator hole," would thrust his bare leg inside to feel the 'gator's position. Then, knowing the location, he would ram a sharp stick down from the surface, and stand by to "conk" the uncomfortable Mr. Gator on his way out.

A more usual hunting method consists of "calling them out." Several men will squat behind a nest, grunt like 'gators, and when their quarry appears to see if their friends are calling, he is soon separated from his hide. One man may seize the long snout, clamping the jaws together, while another wields the weapon.

Some even eat alligators, according to one crew member. "It's pretty meat," he says, "white and fine-grained. Looks like fat pork."

But a bigger problem than alligators lies in wait in the marshes—millions of insects. Mosquitoes, unexpectedly, cause the least bother. It is gnats, swarming all over a man and leaving tiny red stings, which irritate most. And the green-headed fly, which brings blood when it hits and feels like a wasp sting, is fervently hated too.

Swamp crews move to marshes in summer, ride on specially-designed "buggies." Difference between swamp and marsh is clearly shown in pictures on these pages.

But another type of seismograph crew has no insect problem at all. These are the crews living and working in boats in the open waters of the Gulf of Mexico. By contrast with all other seismograph operations, these crews work with fantastic speed, having no holes to drill. One such crew set an all-time record by making 296 shots in a single day! Much research has been done, and great care is taken, to avoid damage to marine life. In inland waters and bays, shot holes are drilled 50 to 100 feet below the bottom to avoid any such damage.

Thus, like the U. S. Marines, Humble seismograph crews operate "on the land, in the air, and on the sea." And by their adventures and triumphs over obstacles, they prove again that the oil industry still pursues the search for oil with zest and vigor.

So when you see the "oil-country safaris" rolling, or flying, or walking, or floating, you can truly say:

"There goes part of the toughest search the world has ever known—the search for oil in the earth."

Crews exploring the Gulf of Mexico live in comfortable boats, navigate by radar, work with "fantastic" speed due to lack of necessity for drilling "shot" holes.

SOME INTERESTING FACTS ABOUT OIL . . .

Editor's Note: In a recent speech entitled, "Oil, Alert" before the Independent Petroleum Association of America, Mr. Hines H. Baker, President of Humble Oil & Refining Company, presented some interesting facts about the oil business, some of which are set forth below:

1. Last year nearly 40 per cent of the wells drilled in the United States were dry holes, compared with 30 per cent in 1941-45, and less than 23 per cent in 1936-1940. The number of dry holes has nearly doubled since 1947.

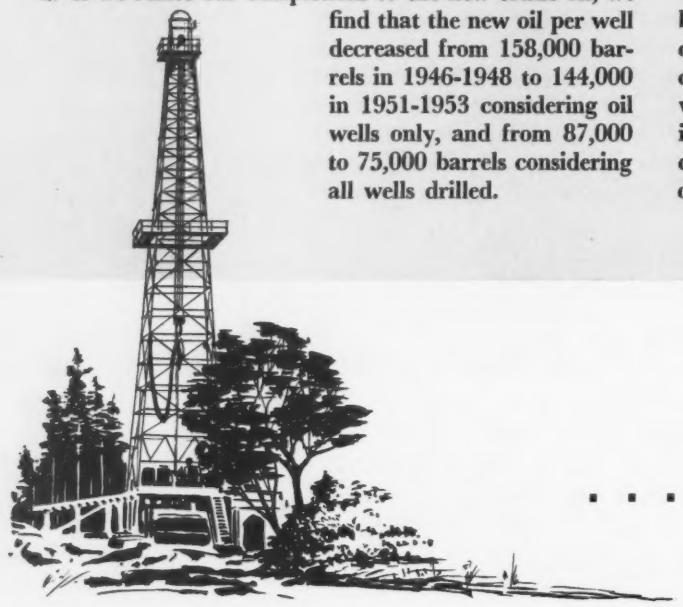
2. If we relate our completions to the new crude oil, we find that the new oil per well decreased from 158,000 barrels in 1946-1948 to 144,000 in 1951-1953 considering oil wells only, and from 87,000 to 75,000 barrels considering all wells drilled.

3. The average well in Kuwait and Arabia produces more oil in one month than the typical domestic well now being developed will produce over its life of 20 or 30 years.

4. The average well drilled by Humble exceeds $100,000 in cost, compared with about $50,000 in 1941-1945 and less than $25,000 in 1936-1940.

5. Contrary to popular belief, oil production is not a fabulously profitable business, but is only about as profitable on the average as other businesses.

Mr. Baker stressed the increasing costs being experienced by the domestic oil producing industry and the need for cost reduction. He also presented a short and simple discussion of the basis of tax policies on petroleum production which is summarized below because it is a particularly interesting and timely presentation of a subject that concerns all consumers of petroleum as well as the employees of oil companies.



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OIL has been a great boon to us in the United States through what it has done for our production in industry, for our comfort and standard of living, for personal transportation, and for our defense and victory in war. We are inescapably dependent upon tremendous quantities of petroleum for our national security as well as for improved standards of living.

It would be sheer folly for this nation to endanger its economic progress and the capacity to defend itself by discouraging the development of new petroleum resources. This is what would happen, however, if the depletion taken into account in determining income subject to tax were to be reduced as is sometimes suggested. Such a change would not only penalize oil producers but very shortly would hurt all consumers. In addition, it would soon reduce the tax revenues realized from petroleum operations, although the change is proposed as a means of increasing tax revenue.

There is much misunderstanding of the principles controlling the taxation of income from oil and gas producing operations because of a lack of general appreciation of the basic facts that the production of oil and gas represents the depletion of capital assets and that tremendous sums of money are lost in exploration and the drilling of dry holes. In reality, the principles involved are reasonably simple and not difficult to understand. They are thoroughly sound. But the industry needs to be alert at this point to see that they are understood.

One of the tax problems relates to the option either to capitalize or to expense intangible development costs. Tangible costs for casing, tubing, pumping equipment, and other items that have a salvage value are capitalized, and the costs are recovered over the useful life of the property through depreciation in the same manner as tangible investments in other businesses. The expenses for intangibles, such as wages, fuel, hauling, and so forth, incident to and necessary for drilling wells and preparing for production do not result in a tangible asset which can be sold or salvaged for other uses.

Usually, operators exercise the option to charge off intangible costs in the year they are incurred rather than over a period of time. The total charge under this practice is exactly the same as if the operator were allowed to depreciate such costs in the same manner as tangible costs. The only difference would be in the time the charge is made. Once taken it cannot be taken again. The effect is

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PERCENTAGE depletion at rates provided by Congress since 1926 is an important provision of the income tax laws designed to deal fairly with the oil and gas producer in order not to tax capital as income and to stimulate the discovery and development of new oil and gas reserves to replace those being depleted through production. In most businesses a specific investment will result in producive facilities, and can be recovered fully through depreciation. In such case the risk incurred is with regard to the rate of earnings that may be realized as a result of demand, competition, price fluctuations, and other market factors. The oil producer faces these same risks along with every other businessman, but in addition he has a unique problem of being required to risk in exploration and drilling a great deal of money with the certain knowledge that a large part of that money will be lost in unsuccessful ventures. The right to deduct his losses in computing income subject to taxation does not return to him the money lost. He can only recover his losses and be justified in taking the risks involved if the income tax laws enable him to recover as capital from a successful venture more than he puts into it. Percentage depletion takes this into account.

The maximum amount of depletion permitted was determined by experience with what was originally termed "discovery value" depletion. Discovery value depletion recognized that the capital depleted through production was the value of oil after discovery, not its cost, and that this amount was required to replace production with new oil by exploration or purchase in order to enable the producer to stay in business without a reduction of his real capital. Percentage depletion at the present rates was adopted as a simpler means of achieving the results of discovery value depletion. It must be continued to avoid what would amount to a tax on capital, since the authority under the Sixteenth Amendment is limited to the taxation of income.

Contrary to the popular belief, oil production is not a fabulously profitable business. On the average, it is only about as profitable as other businesses, and it would be far less profitable than other businesses if it were not for the tax provisions adopted by Congress in recognition of the peculiar nature of its operations.*

The tax provisions applicable to petroleum are based on the nature of the business and are not special tax favors. The industry does not have or seek a tax advantage; but it does expect fair treatment, and would like to have an understanding consideration of its peculiar problems by the public and the government.

Congress has understood the problem from the beginning. It adopted percentage depletion in 1926 after careful study and has maintained it in effect continuously after further review of the facts.

* Figures compiled by the National City Bank of New York for the sixteen year period 1938-1953 show that the average earnings for about ninety of the largest and most successful oil companies have amounted to 12.9% of net worth, compared to 12.8% for manufacturing companies and 12.8% for trading companies.

The Principle Is Accepted, But What About The Rate?‡

THE principle of percentage depletion now seems accepted beyond question, but sometimes the question is raised whether the rate of 27.5 per cent is correct. The best economic evidence of the reasonableness of this rate is its close reflection of the capital value of oil in the ground. At the present time on an average price of crude oil of $2.55 a barrel the maximum percentage depletion is 70 cents, and the average depletion about 63 cents because of the limitation to 50 per cent of net income. This depletion allowance agrees very closely with the discovery value of oil in the ground. In Texas, for example, a number of sales of properties have been made in recent years at a price of about $1.00 a barrel for proved, developed reserves. Deducting from this price a typical development cost of 30-35 cents a barrel (which is in addition to all the exploration expense), indicates a discovery value of about 65-70 cents.

Depletion at the rate of 27.5 per cent has operated similarly to reflect the capital value of oil reserves in the ground over the full range of prices experienced since 1926.

The principle and rate of percentage depletion is right according to the evidence of past and current operations not only for the industry as a whole, but also for all operators regardless of size. Small operators unquestionably need it, as amply demonstrated by evidence presented before Congressional committees this year and in earlier hearings on depletion. The same provision is equally necessary and fair for large companies taking exactly similar risks. Size does not protect a company against any of the real risks in oil exploration and development. Large expenditures in exploration provide no guarantee as to the number or size of discoveries, nor does the drilling of numerous wells provide any assurance that the value of the oil developed will equal or exceed the money risked.

‡ This is an excerpt from an address made by Hines H. Baker before a Division Production Group session, annual meeting of the American Petroleum Institute, Los Angeles, California, November 15, 1950. Title of that address is "Tax Policy and Petroleum Supplies." This talk and the more recent one "Oil, Alert!" from which most of the accompanying article is excerpted, are available in printed form.

Address requests to Humble Oil & Refining Company, Room 1369-72, P. O. Box 2180, Houston, Texas.

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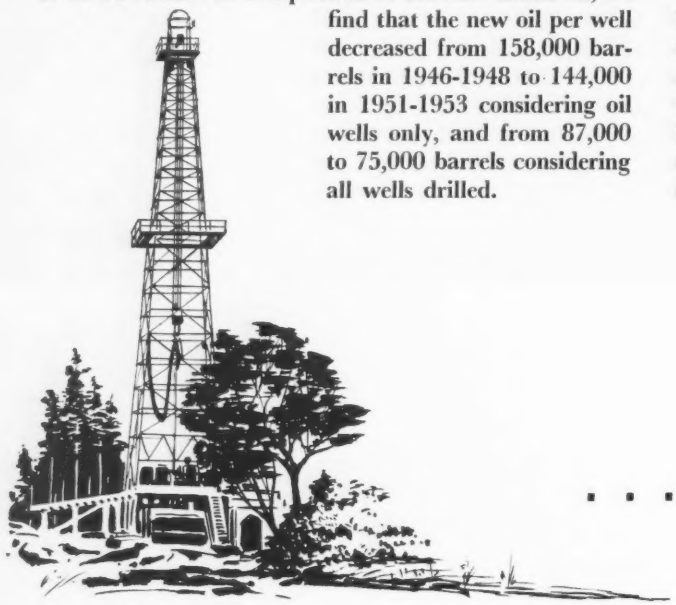

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* Figures compiled by the National City Bank of New York for the sixteen year period 1938-1953 show that the average earnings for about ninety of the largest and most successful oil companies have amounted to 12.9% of net worth, compared to 12.8% for manufacturing companies and 12.8% for trading companies.

The Principle Is Accepted, But What About The Rate?‡

THE principle of percentage depletion now seems accepted beyond question, but sometimes the question is raised whether the rate of 27.5 per cent is correct. The best economic evidence of the reasonableness of this rate is its close reflection of the capital value of oil in the ground. At the present time on an average price of crude oil of $2.55 a barrel the maximum percentage depletion is 70 cents, and the average depletion about 63 cents because of the limitation to 50 per cent of net income. This depletion allowance agrees very closely with the discovery value of oil in the ground. In Texas, for example, a number of sales of properties have been made in recent years at a price of about $1.00 a barrel for proved, developed reserves. Deducting from this price a typical development cost of 30-35 cents a barrel (which is in addition to all the exploration expense), indicates a discovery value of about 65-70 cents.

Depletion at the rate of 27.5 per cent has operated similarly to reflect the capital value of oil reserves in the ground over the full range of prices experienced since 1926.

The principle and rate of percentage depletion is right according to the evidence of past and current operations not only for the industry as a whole, but also for all operators regardless of size. Small operators unquestionably need it, as amply demonstrated by evidence presented before Congressional committees this year and in earlier hearings on depletion. The same provision is equally necessary and fair for large companies taking exactly similar risks. Size does not protect a company against any of the real risks in oil exploration and development. Large expenditures in exploration provide no guarantee as to the number or size of discoveries, nor does the drilling of numerous wells provide any assurance that the value of the oil developed will equal or exceed the money risked.

‡ This is an excerpt from an address made by Hines H. Baker before a Division Production Group session, annual meeting of the American Petroleum Institute, Los Angeles, California, November 15, 1950. Title of that address is "Tax Policy and Petroleum Supplies." This talk and the more recent one "Oil, Alert!" from which most of the accompanying article is excerpted, are available in printed form.

Address requests to Humble Oil & Refining Company, Room 1369-72, P. O. Box 2180, Houston, Texas.

They Take The High

Humble's deep-water oilmen take to the air in an effort to solve one of the big problems of offshore work

THAT gawky-looking but amazingly agile aircraft, the helicopter, is becoming a familiar sight around Humble rigs now drilling in the marginal seas off the Louisiana coast.

For the first time, the versatile "egg beaters" are being used to shuttle crewmen to and from the crane-legged platforms that stand fathoms deep in hard-to-reach waters off a marshy mainland. And they show great promise of being able to help unknot one of the big problems of offshore work—that of getting personnel to the job and then home again.

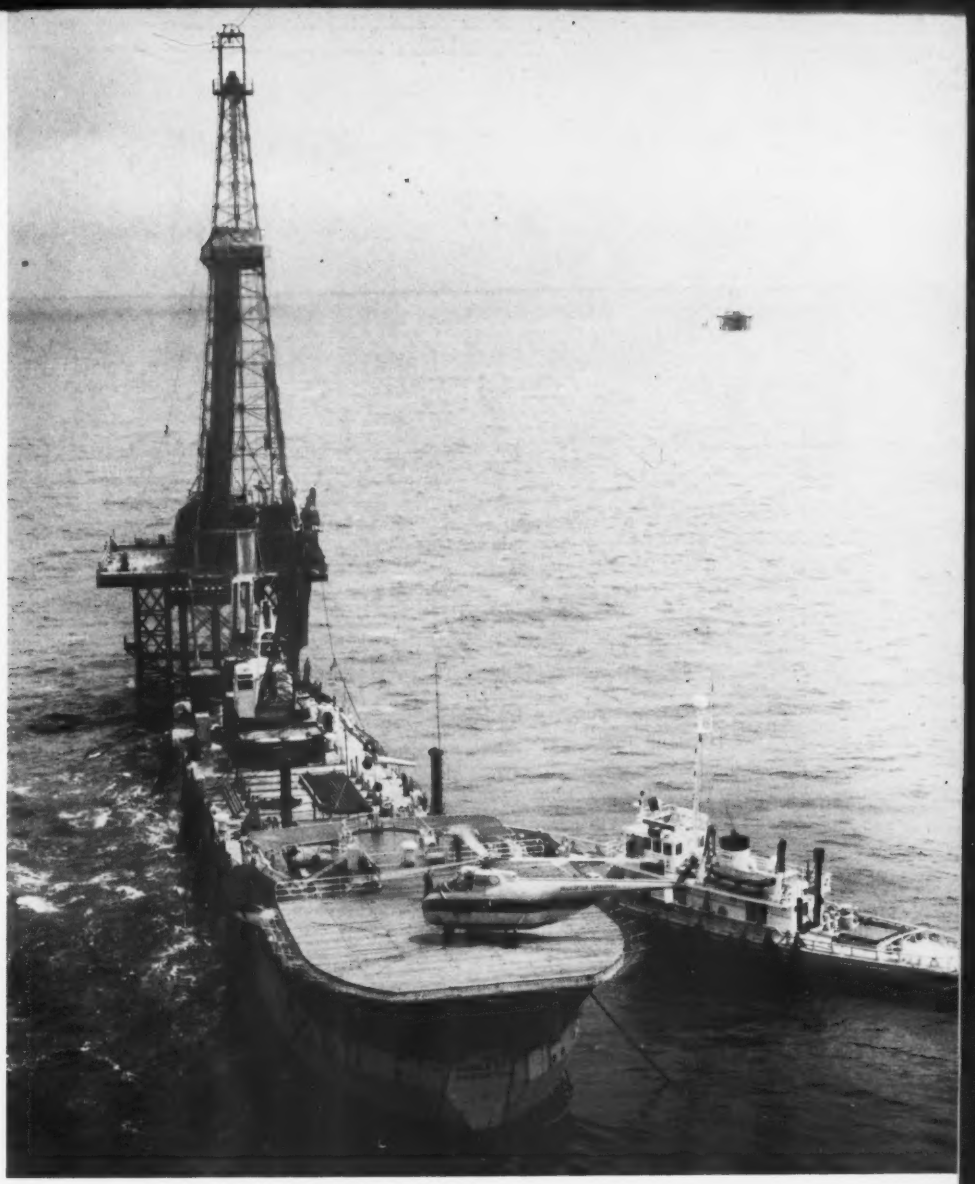
"Operation Whirlybird," as it might be called, got under way early this year when five of the converted LST's that serve Humble in its offshore drilling operations underwent a face-lifting. Shipfitters came aboard, and for several days the decks resounded with the whine of power tools and the thump of materials being worked into place. When the jobs were finished, each of the vessels had over its stern a wooden platform that looked like a canopy.

The new additions were flight decks. Their dimensions were compact (approximately 50 by 70 feet), but they provided plenty of roosting space for even the largest of helicopters.

It was not until April, when Humble

Helicopter loaded with offshore crewmen takes off from 100-foot-square "airfield" next to Grand Isle district office.

Passengers debark on flight deck of one of Humble's offshore tenders. Big 'copter carries payload of about 1000 pounds.



This "baby flattop" is a converted LST to which has been added a flight deck. A helicopter can land here with ease.

n Road

launched a wildcat test in the choppy waters south of Timbalier Island, that the helicopters got their first chance to show what they could do in offshore work. The drilling platforms of this new wildcat stood only 15 miles out from the barren sea marshes, but it was some 45 miles from Humble's district headquarters at Grand Isle. By boat, the trip to Timbalier involved a ride of from four to five hours over water that was more or less continuously rough.

"In getting crews to the job," a Grand Isle supervisor recalls, "the time factor was a problem in itself, but another big headache was seasickness. A particularly rough boat ride would sometimes leave everybody a little green around the gills."

ALSO involved in the decision to use helicopters at South Timbalier were considerations of safety. Humble has always maintained a standby boat at its drilling platforms in case someone gets hurt and has to be rushed ashore. But a five-hour trip in a bouncing boat is hardly the ideal way to get an injured man to a doctor. A helicopter, however, as was proved time and again in Korea, makes a highly efficient ambulance.

So late in April, Humble contracted for the services of an eight-place helicopter (two pilots, six passengers) and inaugurated regular flights between Grand Isle and South Timbalier.

The 49 men assigned to the Timbalier wildcat—tool pusher, drillers, roughnecks, and seamen—live and work offshore for five days at a stretch. But their work weeks are so staggered that on any given day some are returning to duty while others are leaving for a respite on the mainland. To handle this steady flow of traffic, the big 'copter has to make twice-a-day trips.

Once every morning and again at mid-afternoon, on the landing area that has been carved from the district headquarters parking lot, the "flying ferry" takes on a new load of passengers and then revs up its rotors. The ponderous craft then lifts itself slowly in the air and starts windmilling down to Timbalier at a 65-knot clip. A little more than half an hour later, it sets down with surefooted ease on the bobbing deck of ST-8.

IN A TYPICAL month recently, the big helicopter made 72 round trips, including several special flights, and hauled slightly more than 500 passengers. Not a single case of airsickness was reported, and the reaction of the crewmen, especially those susceptible to seasickness, was highly favorable. As for its usefulness as a flying ambulance, the helicopter proved its worth when there was a mishap at Timbalier and a crewman injured his leg. Within 40 minutes of the time he was hurt, he

Weight check is made of passengers and their baggage before helicopter is loaded. Pilot (in coveralls) jots down totals.

Two pilots work out seating arrangement with help of special slide rule so as to maintain most efficient center of gravity.

was on his way to the hospital—via helicopter.

At first glance, it might seem inordinately costly to use a helicopter on an around-the-month basis. But this new means of offshore transportation has enabled Humble to reduce its boat runs to Timbalier from the customary once or twice a day to only three times a week. It has also removed the need for keeping a standby boat out at the platform, ordinarily another big item of expense.

So successfully, overall, has the idea worked out that Humble is now considering plans for putting the same service into effect at its drilling operations off Pelican Island and in Caminada Pass.

In addition to the big crew plane, a smaller helicopter is also being used at Grand Isle. This pint-sized whirlybird, which has a Plexiglas bubble over its cockpit and pontoons for landing gear, can carry three persons. It does double duty as a conveyance for pumpers and as a supervisors' plane, and it, too, seems to be paying its way.

TAKE, for example, its use by the pumpers. One of Humble's offshore platforms not only has two producing wells beneath it, but it also serves as a gathering point for oil from six other nearby wells. In the past, the Company has had to maintain living quarters on the platform, keep a pumper and a cook stationed there to run the facilities, and see that a standby boat was available at all times.

Today, however, the pumper lives on land. Automatic controls flow the wells and shut them in whenever a piece of equipment fails. At regular intervals, the small helicopter flies the pumper out to the platform and leaves him. He carries out his duties in a matter of hours and is then picked up and flown home.

The small helicopter has also put seven-league boots on Grand Isle's supervisory personnel. On a recent Saturday afternoon, for instance, the assistant district superintendent climbed into the small plane and spent three hours hop-skipping around Humble's offshore locations. During that short time, he was able to visit three drilling rigs and to make aerial inspections of three production platforms. By boat, the same trip would have taken 10 to 12 hours.

Helicopter transportation, Humble

Final check before the takeoff. All passengers wear life jackets and keep their safety belts fastened during flight.

Once around before landing. The "flying ferry" reaches its offshore terminal and prepares to settle down on flight deck.

has found, involves several procedures that are quite different from those that prevail with conventional aircraft. One example: Before the big helicopter is loaded, a careful weight check is made of the passengers and their baggage. The two pilots then take out a slide rule, do some rapid calculating, and seat the men according to how they tip the scales. The pilots explain that this helps them maintain a more efficient center of gravity in the plane. It keeps them from "running out of stick" —in other words, from not being able to maneuver the ship as well as would otherwise be possible.

ARE helicopters safe? The pilots who fly them at Grand Isle will tell you that the hazards of highway travel worry them more. Nevertheless, they cooperate fully with Humble in observing all possible precautions. Passengers are instructed in the use of "Mae West" life jackets, and they must wear them during all flights. Seat belts are kept fastened at all times. No smoking is permitted. A flight plan is filed before each take-off, and a careful radio check is made to see that the plane reaches its destination. And going down to Timbalier, the helicopter skims along the coast as far as it can. Only some 15 miles of the flight is over open water.

Another safety factor is a free-wheeling unit that allows the helicopter's rotor to windmill freely in case of engine failure, thus enabling the pilot to make a safe landing. Should that landing be on water, the big helicopter has available an oversized built-in "Mae West" that can keep it afloat for two hours or more. The small plane, of course, can rely on its compartmented rubber-and-fabric pontoons for buoyancy.

Exploration crews have long used the helicopter in reconnoitering the marshlands, but "Operation Whirlybird," so far as Humble knows, marks the first time that this flying wheelhorse has been assigned regular duties in the drilling and producing of wells. The helicopter seems so peculiarly suited to offshore work, however, that we shall probably be seeing more and more of them in the air off our southern coasts.

If so, it will be just another case of the petroleum industry's adapting the most modern methods in the production of oil.

Seaman stands by with chock as helicopter noses in to make contact with flight deck. In rough water, tender is headed into the waves to reduce side-to-side rolling.

Home base for Grand Isle's offshore helicopter service is this square gravel-and-asphalt landing area which has been carved out of district office's parking lot.

TOWARD BETTER HEALTH

Humble's Medical Division is not content merely with correcting situations; as far as possible, it works ahead to anticipate and avoid trouble

SOME weeks ago, the Medical Division held open house in Houston. At that time, employees had an opportunity to meet the members of the Houston Office staff, visit the remodeled quarters provided in the Main Office, and to inspect the expanded facilities which help keep Humble people well.

What they saw and heard visibly impressed them. It all added up to another story of Humble progress. Everyone who attended must have carried away the conviction that Humble's Medical Division is truly a service unit and certainly has the health of the employees at heart. And he would be right. It is not content to stay abreast of the times in the field of industrial health; it makes every effort, in staff, services, and facilities, to stay *ahead* of the times!

Because it is so important to every employee, Humble's Medical Policy is published with this article. The purposes of that policy were summed up by Dr. V. C. Baird, Humble's Chief Physician, when he said: "A medical department contributes to the operation of the company it serves if it improves the health, both mental and physical, of employees and management; if it decreases absenteeism from work; if it helps reduce the number of accidents; if it evaluates and promotes healthful work places; and if it thereby

Dr. V. C. Baird, Humble's Chief Physician, welcomes visitors during open house and answers their questions about diabetes.

Mrs. Doris Wallace tells another group of open house visitors how instruments and equipment are used to make medical tests.

Receptionist Marguerite Dillee takes a telephone call while Nurse Pansy Dotson talks to Mrs. Marion Frels about a medical appointment. Others wait their turn in the recently remodeled waiting room.

makes happier and more efficient employees."

To achieve those purposes and to follow that policy, the Medical Division has made significant additions to its staff, enlarged its facilities, and expanded its program of work during the past several years. As result, an even greater measure of health protection and care, especially in the field of preventive medicine, has been extended to a greater number of people.

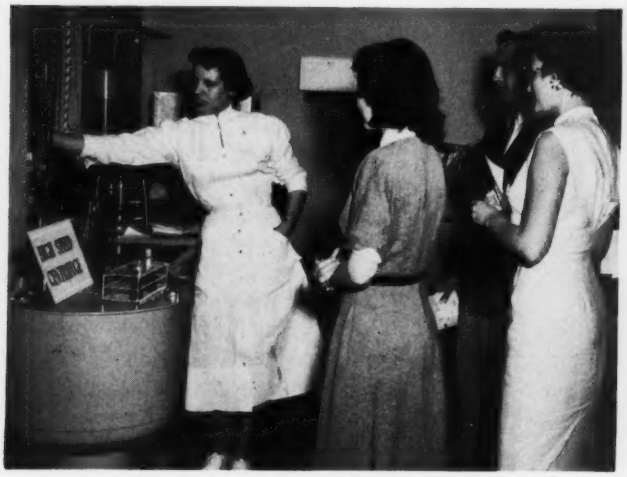
In the past few years, the staff of physicians has been increased from six to nine—four at Houston, four at Baytown, and one in charge of the mobile unit which takes medical services to employees in the field. Other additions to the technical staff include a medical office administrator, an industrial hygiene engineer, an industrial hygienist, an industrial hygiene analyst, a radiologist, and a physiotherapist.

To the average employee, these questions may occur, or perhaps have already occurred, concerning his relations with the Medical Division:

(1) What medical services will it provide me?
(2) How can I get those services?
(3) How do such services fit in with the work of my family physician?

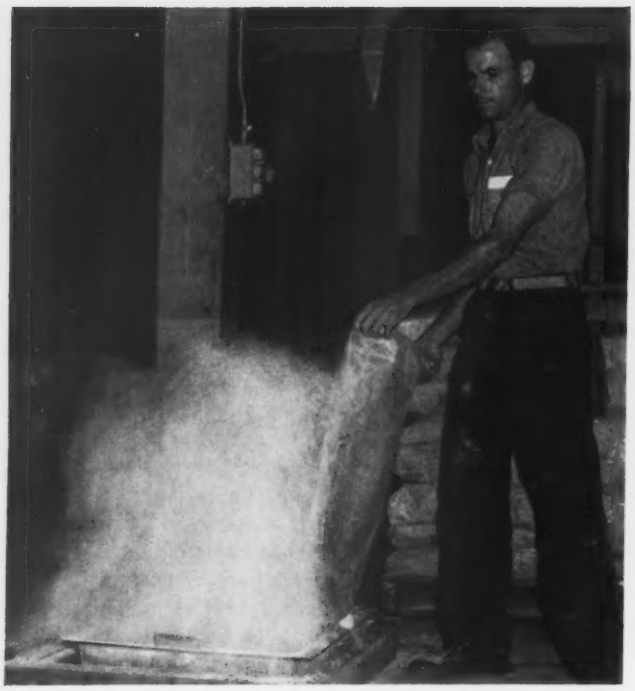
The answers are simple:

(1) Any employee is eligible for a medical examination as provided by the periodic examination program. He is encouraged to ask for help, in the way of advice and counsel, on any personal health problem.
(2) Any such help, within the limits of the Division's staff and its facilities, are his for the asking. If he lives in or near the Houston-Baytown area, it is rather easy for him to be examined by, or obtain medical advice and counsel from, one of the staff physicians in either place. If he lives too far away to be conveniently served by either Houston or Baytown, he may schedule an examination to coincide with a future meeting he will attend, or a visit he will make there. He may also avail himself of the services offered by

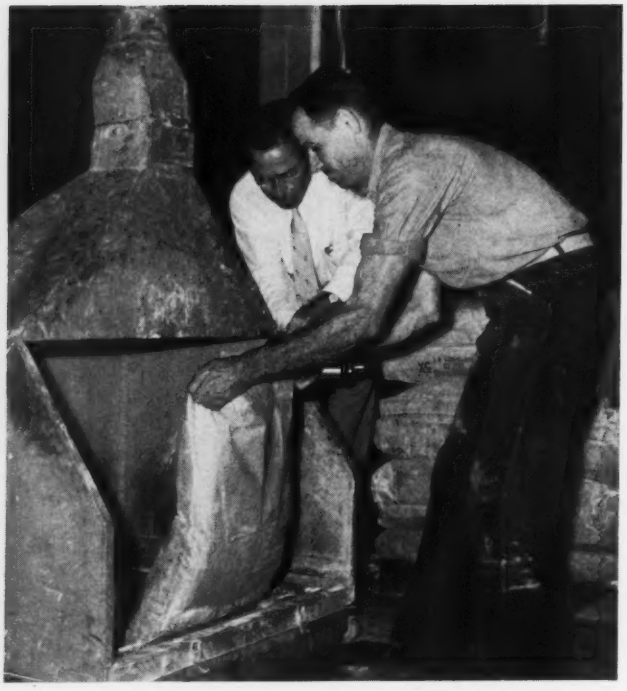


Miss Glenna Stout, laboratory technician, demonstrates the use of high speed centrifuge used in doing tests on blood samples.

Mrs. Doris Wallace, of the Houston Office medical laboratory, explains developing of an X-ray film to interested visitors.



R. H. Dworsky of Specialty Manufacturing in this posed picture shows the old method of mixing powdered pigments for paints.



Safer method of mixing pigments under ventilator. James Hammond, industrial hygiene engineer, checks air flow in ventilator.

Humble's Mobile Medical Unit the next time it comes into his area.

(3) An employee's family doctor, like his church, should always be a matter of his own personal choice. The staff of the Medical Division works *with* the family doctors. The medical staff is not, and does not wish to be a substitute for the family doctor; it merely supplements his work in keeping the individual well and happy. Treatment for illness is not provided by the Company.

Those who make up the Medical Division have always followed this course: They are not content merely with correcting a situation. They work ahead, as far as possible, to protect employees by anticipating trouble and avoiding it.

Considerable thought and effort are being given to studying the medical statistics by groups of employees according to age and occupation. By carefully analyzing such information, the Division is attempting to find out more about the stresses and strains, the health problems, and the mental and physical pressures that afflict certain age groups and those involved in certain occupations. Being so informed, it can better advise and counsel those employees, enabling them to achieve a prolonged, useful, productive, and happy life span. This is especially important as the Company itself grows older and the average age of the employees increases.

To a group visiting in his office during open house, Dr. V. C. Baird makes it clear employees are encouraged to consult with the medical staff about health problems.

Although the communicable diseases are being replaced by chronic and degenerative conditions as a cause of sickness, such common causes of absenteeism as diarrhea, headaches, the common cold and related disorders (perhaps the most widespread offenders from standpoints of general misery and lost time) are still being examined critically, to determine how suffering and lost time can be reduced. Members of the staff work with those who appear most susceptible to cold and upper respiratory conditions by showing them how to avoid some troubles by building up body resistance and other preventive measures. When such troubles do strike, employees are counseled on proper treatment.

Diseases of the heart and blood system receive a considerable amount of

study and effort. This is especially important to older employees, but it is by no means restricted to that group. Anyone over 40 is encouraged to take tests, such as the electrocardiograms, which help determine whether the heart is functioning properly. Such tests are useful in showing that a heart is normal and healthy, that trouble is developing, or is already at hand. It may often be possible, when incipient disease is detected by early examination, to add years to an employee's life by teaching him to live with his condition by slowing down, eating properly, and exercising properly.

Work similar to that done on heart and blood vessels is being done on liver and gall bladder conditions, and on the impairments of the kidney, the lungs, and the genito-urinary system. Interest in the Division is also being directed to early detection of diabetes. In these matters, the staff believes that such troubles can be reduced in severity, often completely controlled, or even eliminated, if found and treated soon enough.

Industrial hygiene is another field of preventive medicine that has become increasingly emphasized during the past seven or eight years at Humble. Once more, the aim is to stay ahead of trouble by preventing its outbreak. Air, materials and specimens are scrupulously checked for possible contaminants. A hygienist checks, with the assistance of supervisors, the working spaces where trouble may lurk, especially where dangerous chemicals or other materials are used as a part of daily routine.

Where necessary, control features are designed and methods of work practice are prescribed. To make doubly sure that no harm comes to employees, those who work in such surroundings or with toxic materials are tested at periodic intervals. For example, people in laboratories and other places who work with mercury, leaded paints, tetraethyl lead, and other potentially dangerous substances are examined as regularly as necessary to make sure they are not absorbing dangerous amounts into their bodies.

The work of the industrial hygiene engineer also takes him into Company field communities where, in conjunction with the Civil Engineering Division, the water and sewage disposal systems are checked. He also advises on insect and rodent control, counsels on good practice in the use of herbicides and insecticides, and generally sees to it that the health of the community is safeguarded. Any serious illness or dread communicable disease in the community may bring him immediately to the scene—and so far there has been nothing resembling an epidemic in any Company field community.

In addition to their other work, the Division's staff of physicians, hygienists, nurses, and others make themselves available to further the cause of health in towns and cities where Humble people live. They serve on civic health projects and in professional societies and organizations whose work is dedicated to better public health. Thus employee families are benefited, as well as employees themselves.

Though it now offers more services to a greater number of people, nothing has changed in the basic, fundamental Humble medical policy or in the Medical Division's attitude toward the individual. The personal dignity of the patient is respected. In carrying out its duties, the Division maintains confidential medical records on all employees examined and respects the confidential nature of personal medical information obtained.

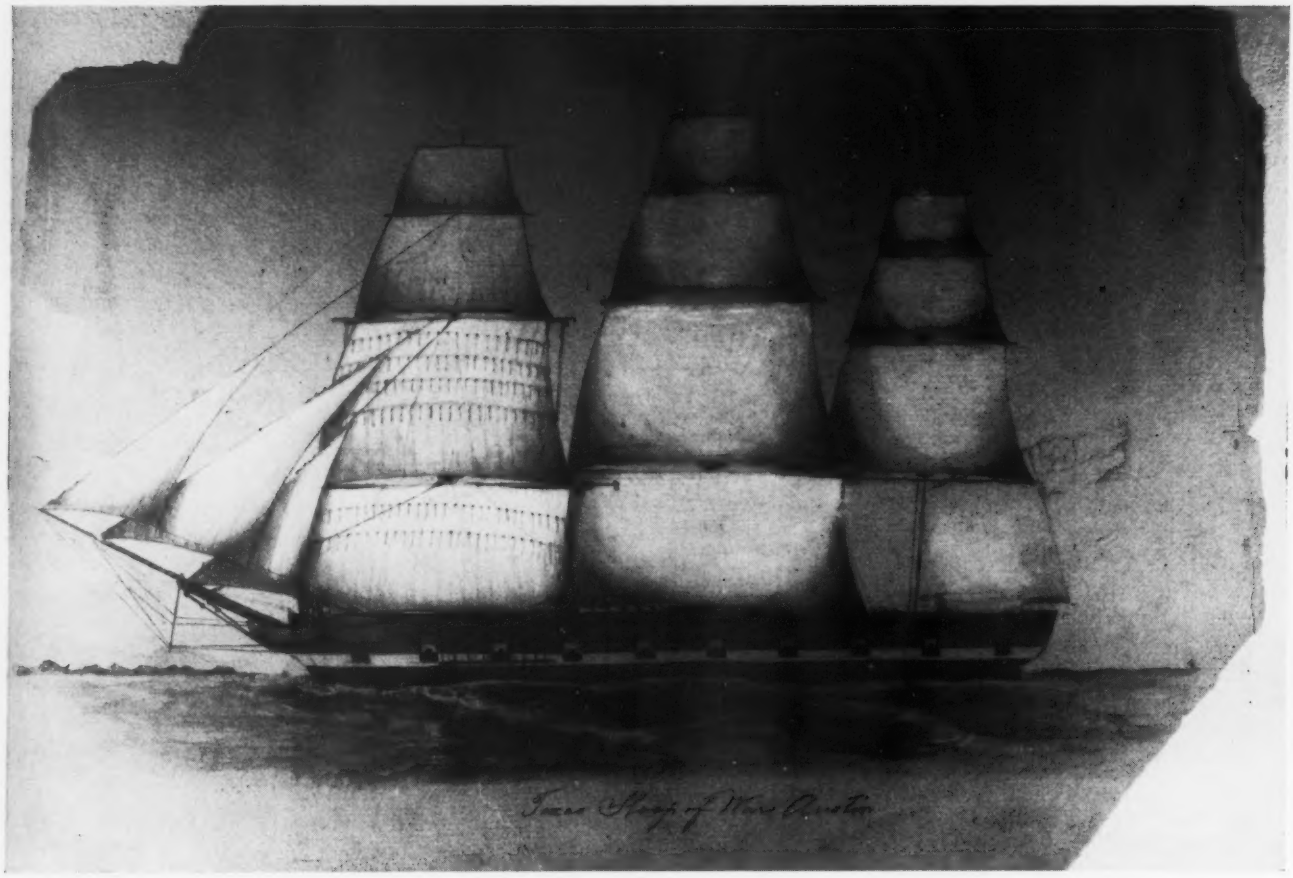
As to what the Division is trying to do, it might be compared with stamping out campfires before they become forest fires. From the Chief Physician to the newest members of the staff, they have only one fault to find with the old saying that "an ounce of prevention is worth a pound of cure." If they had their way about it, they would much rather provide the pound of prevention that is worth a ton of cure.

HUMBLE'S MEDICAL POLICY

The Management of the Humble Companies regard the health of employees of primary concern, and through the years have instituted policies and programs designated to provide healthful working conditions and proper sanitation. In addition, it is the policy of the Humble Companies to maintain a competent medical division to be of service to employees in encouraging good health by:

1. Promoting sanitary, healthful working conditions based on sound medical principles and accepted environmental health standards.
2. Providing, when requested by an individual employee or Management, information and counsel on health matters.
3. Conducting pre-employment medical examinations and making recommendations concerning proper placement.
4. Conducting medical examinations of employees who handle potentially toxic materials or who may engage in hazardous occupations, and making available to Management information, professional advice, and research in the field of toxicology and environmental health.
5. Offering medical examinations at intervals on a voluntary basis to all employees.
6. Cooperating and consulting with employees' private physicians concerning health problems of employees.
7. Cooperating with local and national industrial health organizations and public health agencies in improving general health standards.

In carrying out the foregoing, the Medical Division maintains confidential medical records on all employees examined and respects the confidential nature of personal medical information obtained.



The Flagship Austin *from an old drawing*

THE TEXAS NAVY

The second Texas Navy had almost as much trouble with depleted treasuries and political storms as with an armed foe

LATE in 1837, Sam Houston, never much in favor of a Texas Navy or too respectful of the men who fought in it, reluctantly signed a bill appropriating money for a second fleet. But President Mirabeau B. Lamar, inaugurated the following year, favored a navy as strongly as Houston opposed it. Lamar's feeling was supported by the Texas Congress, whose Senate went so far as to pass a secret resolution that Texas buy the Mexican fleet captured by the French!

The first ship to take its place in the second navy was the brig *Potomac,* bought early in 1838. She never became a seaworthy fighting ship, and spent her days tied to a Galveston wharf, serving as a "receiving ship." Next was the brig *Charleston,* which steamed into Galveston harbor in March, 1839, and was promptly renamed the *Zavala,* in honor of Texas' first Vice President, Lorenzo de Zavala.

Five more ships were bought in 1839: the *San Jacinto* (formerly the *Viper),* a 170-ton schooner of eight guns; the *San Antonio* (formerly the *Asp),* a 170-ton schooner of eight guns; the *San Bernard* (formerly the *Scorpion),* a 170-ton schooner of eight guns; the *Wharton* (formerly the *Colorado),* a 400-ton brig of 16 guns; and the *Austin,* a 600-ton sloop-of-war of 38 guns—easily the largest and most heavily weaponed ship in the fleet.

The *Archer* (formerly the *Galveston),* a 400-ton brig of 16 guns, was bought in April, 1840, bringing the total to eight ships.

With the new fleet came a new commodore. A great many had been gracious enough to offer their services, but all were passed over in favor of 29-year-old Edwin Ward Moore, Lt., U.S.N. Entering the American Navy as a midshipman at the

(Editor's Note: This concludes the Texas Navy article begun in the March-April issue.)

age of 15, Moore had served for another ten years before winning his lieutenancy. Fearful that he might well wait 25 more for his captaincy, Moore's bird-in-hand philosophy was pleased with the prospect of a commodore's post in the Texas Navy. Upon taking over in December, 1839, he immediately made the *Austin* his flagship.

Shifting Winds

The first Texas Navy had spent a good part of its time fighting an armed enemy on the high seas. The second whiled away a good part of its time in less spectacular fashion, fighting a less deadly, but more dogged, foe: financial troubles and the shifting winds of political storms.

By the spring of 1840, hostilities had broken out between Yucatan and Mexico. Texas quite naturally decided to supply what it could in aid and comfort to Yucatan. Once again, it appeared that the Texas Navy could limber its guns and clear its decks for action. Accordingly, a base was established for the fleet at the Arcas Islands, some 100 miles west of the port of Campeche.

The navy spent most of 1840 in what has been accurately termed "diplomatic cruising." Ships under Moore took some prizes, but few engagements could be dignified with the word "battle." On one occasion, being strapped for ready cash, Moore decided to take it where it was most conveniently available. Going upriver to the Tobascan coast town of San Juan Bautista, he levelled his guns on the place and exacted a tribute of $25,000 from the fearful populace. The money came in handy; without that windfall the navy might have been on short rations!

Yucatan was pleased with the effectiveness of the Texas Navy, and in 1841 the Yucatan government made an agreement with President Lamar of Texas to rent the fleet for $8000 a month.

Commodore Moore received these order in a sealed packet with instructions not to open it until he had put to sea. Lamar was obviously afraid of public disapproval of his agreement. After recruiting new men and revictualing his ships, Moore crossed the bar of Galveston Bay on December 13, 1841, and opened the mysterious packet.

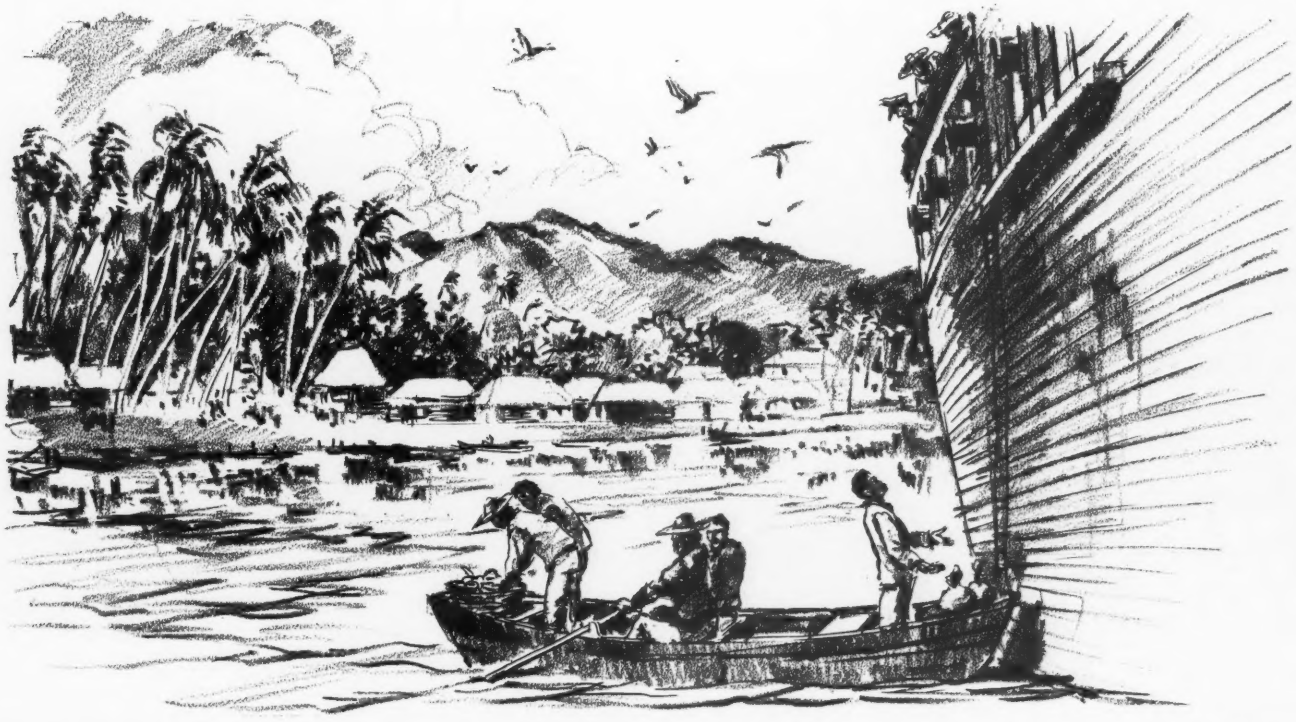
Moore, of course, found the agreement to his liking and proceeded at once to Yucatan. When he arrived he learned to his chagrin that the Yucatecos had made their peace with Mexico. After some dickering, however, Yucatan agreed to pay the rental for a few months and keep the Texas fleet on hand, just in case Mexico should fail to keep its promises. After a tumultous five months, Yucatan yielded to Mexican pressure and a depleted treasury and cancelled the agreement. Moore and the fleet returned to Galveston in May, 1842.

Mutiny

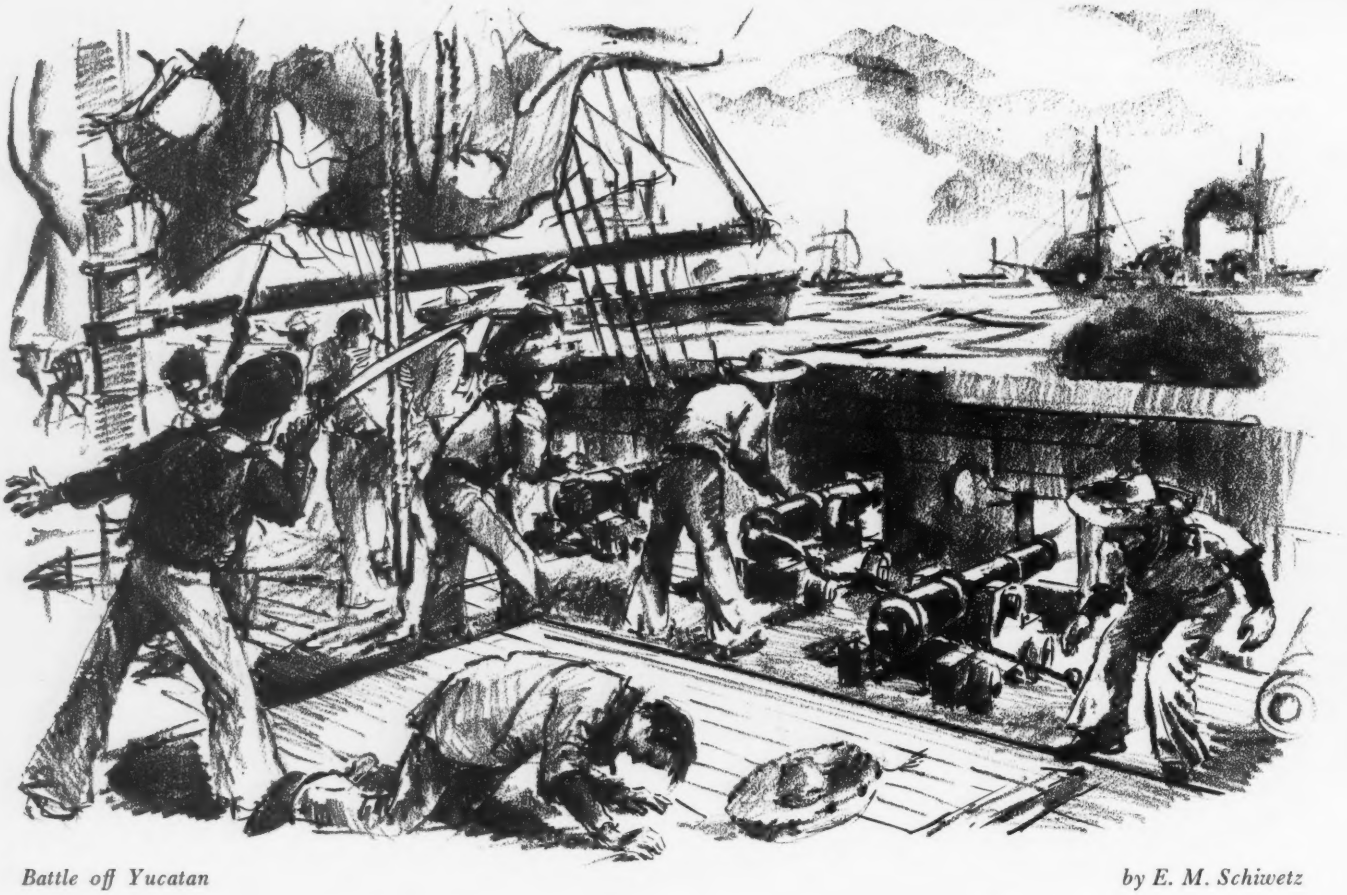
The year 1842 saw the first and only mutiny in the Texas Navy. Actually, the plot had been hatched among disgruntled seamen off the Yucatan coast the year before. The smouldering conspiracy flared into open mutiny while the schooner *San Antonio* lay anchored in the Mississippi River off New Orleans on February 11, 1842.

High ranking officers had gone ashore. Fearing desertions, they left orders that the crew be kept aboard. As might be expected, this brought on more than the usual amount of growling and grumbling in the forecastle.

Mutiny began to bud when, somehow, a few bottles of liquor were smuggled aboard, no doubt by someone less interested in the good of the ship than in turning a fast dollar. Fired with liquor, conspirators worked themselves quickly into an ugly mood. Marine Sergeant Seymour Oswald approached Lt. M. H. Dearborn and demanded shore leave for himself and his friends. Dearborn refused, and a bitter



Tribute from Tobasco *by E. M. Schiwetz*



Battle off Yucatan *by E. M. Schiwetz*

argument began. Lt. Charles Fuller, the *San Antonio's* ranking officer then on board, came up from below to investigate the trouble.

Fuller decided (unwisely, as it turned out) to nip what appeared to be incipient riot by turning out the marines under arms, detailing Sgt. Oswald to issue weapons. The psychology of placing Oswald in position to quell trouble he had been instrumental in starting should have worked—but it didn't. When he had the chance, Oswald issued arms not only to the marine guard, but also to his cronies. Into his own belt he thrust a pistol and a tomahawk.

Approaching Lt. Fuller as if to report that the guard was armed, Oswald suddenly struck viciously at the officer with his tomahawk, but missed. Out came Fuller's pistol, and a wild fight took place on deck. When the smoke cleared away, Fuller lay dead, two midshipmen were seriously wounded, and Dearborn had suffered the embarrassment of being knocked down the hatch and locked in.

Oswald and his mutineers lowered a boat and made a run for it. They had a short-lived "freedom." Cries from the wounded and imprisoned officers brought help from the nearby U. S. Revenue Cutter *Jackson,* which caught and returned some of the mutineers. Others were rounded up in New Orleans, where they spent a long time enjoying the hospitality of the local jail.

Mutineers Sentenced

When word of the mutiny reached Commodore Moore, he vowed to "mete out to the rascals the uttermost penalties of the law." How well he kept his word is described, in an eyewitness account, by Midshipman Alfred Walke, who kept a journal written in clear, flowing script. Walke's journal, which reposes in the Texas State Archives at Austin, describes the sentencing of mutineers as it took place aboard the *Austin* in 1843:

"On board the *Austin,* April 21st, 1843: During the night of the 20th, the brig *(Wharton)* parted company with us . . . At 10:30 a.m. called all hands to witness sentence of court martial in the case of the mutineers of the Texas schooner of war *San Antonio.* When the Articles of War were read, the charges and specifications of charges also read against Frederick Shepperd (late boatswain of the *San Antonio),* who was acquitted and released, John Williams (seaman) who was not guilty of the 1st and 2nd charges but guilty of the 3rd but recommended to mercy and was pardoned and released from confinement, & William Barrington (seaman) who was guilty but in consideration of his informing Mr, Dearborn (Lt. on board the *San Antonio)* at the last moment that a mutiny was to take place his sentence was 100 lashes with the cats and told he would have it inflicted on him the next day at meridian. The charges were Mutiny, Murder or an attempt to Murder, and Desertion.

"April 25th, 1843: . . . At 11:30 called all hands to witness sentence of court martial in case of schooner *San Antonio* . . . against Edward Keenan who was guilty of the 3rd charge and punished immediately with 100 lashes with the cats & released and Antonio Landois (Marine), Wm. Simpson (Cpl., Marines), Isaac Allen & James Hudgins

(seaman) who were found guilty of all the charges and sentenced to be hung at the fore yardarm & given until meridian next day to prepare to die when the crew was piped down & the prisoners were secured on the quarter deck abaft No. 9 gun.

"April 26, 1843: . . . At 11:45 called all hands to execute sentence of court martial when they were addressed by Commodore Moore on the subject of mutiny. At 12:00 the prisoners were carried forward & placed upon the scaffold. After addressing the crew the ropes were placed around their necks. Until this time they appeared to believe they would be pardoned and did not evince much fear, but now the truth flashed upon them and they knew they had to pay the penalty of their crimes and commenced praying eagerly and piteously for pardon. At 12:30 the signal gun was fired & the four prisoners run up to the fore yard.

"April 27th, 1843: At 1:30 p.m. lowered the prisoners down & gave them . . . to prepare for burial. At 1:40 filled away. At 2:30 laid the main topsail to the mast and called all hands to bury the dead and after reading the funeral service over them their earthly remains were committed to the deep . . . "

Two of the leading mutineers were not aboard the *Austin* when sentence was carried out. Seymour Oswald, the mutinous sergeant, had escaped before the party was surrendered to Moore. Benjamin Pompilly had died in prison, confessing on his death-bed that it was he who had killed Lt. Fuller. Shepperd's (or Shepherd's) testimony during the court martial developed that the mutineers had plotted to seize the *San Antonio* and sell her to Mexico. Shepperd, though he escaped death by hanging, had not long to live. He was killed three weeks later by a shell fired in an engagement off Yucatan from either the *Montezuma* or the *Guadalupe*.

The Last Sea Battles

April 30, 1843, found the Mexican and Texan navies locked in the first major naval battle since the Texas Revolution. (War had broken out again between Mexico and Yucatan, and the Texas Navy had been rented again to Yucatan.) On that day, Moore, joined by a few tiny vessels of the Yucatecan flotilla, came upon the entire Mexican fleet, less one armed steamer. Commanding the Mexican warships *Guadalupe* and *Montezuma* were a couple of former officers of the British Navy, captains Charlewood and Cleaveland.

A more cautious commander would have thought twice before closing with the formidable Mexican fleet, but not the stout-hearted Moore. Badly out-gunned (some of the enemy mounted 68-pounders, as opposed to the 24-pounders that were the heaviest guns in Moore's fleet), and with his ships manned by no more than half their full war strength, Moore closed and began a running brush with the Mexicans.

The enemy withdrew for a time, but bore down again later in the day. Ships drew close together and withering broadsides were exchanged. The *Austin* received a 68-pound shot which narrowly missed killing Commodore Moore. A shot received by the *Wharton* caused the only Texan casualties—two killed, four wounded.

It was learned later that the enemy casualties included Capt. Cleaveland and 14 men killed aboard the *Montezuma,* with 30 men wounded. The *Guadalupe* had seven men killed

and several wounded.

Shortly before noon, the squadrons had become so separated that firing became ineffective. With a parting shot or two, the fleets parted, Moore and his fleet continuing on to Campeche.

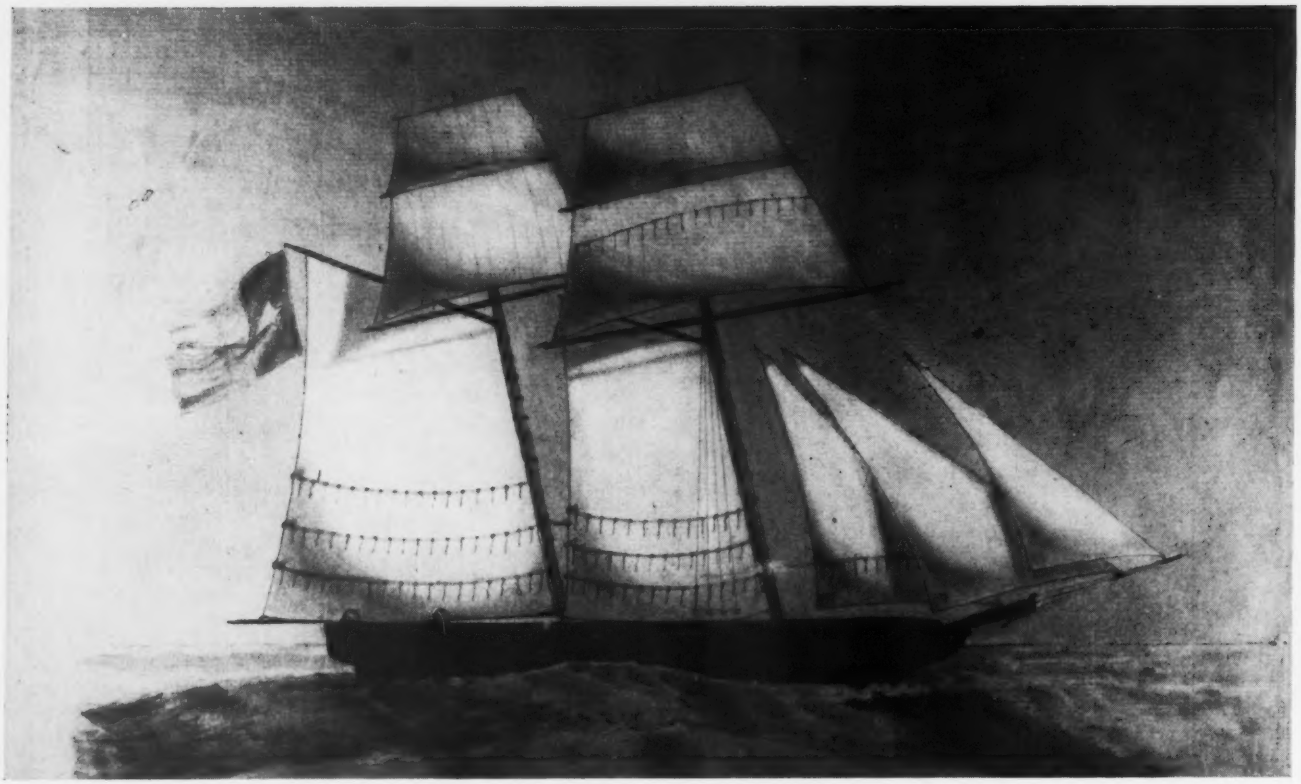
Two weeks later, Moore and the Mexicans were at it again. On May 16, the *Austin* and *Wharton,* with the small Yucatecan flotilla, set out to meet the enemy. Before noon that day, the two Texan warships were exchanging fire with the *Montezuma* and the *Guadalupe,* while lesser craft circled and fought in lesser orbits of battle.

In a 14-mile running fight, the *Austin* received so many hits in her rigging from the giant 68-pounders of the enemy that Moore was unable to close with the Mexicans. He had at one time, however, a chance to place his ship between the two principal enemy craft and give both a good blasting from his port and starboard batteries.

With his ship's rigging badly riddled, Moore had to turn back to Campeche, taking the *Wharton* with him. Both sides claimed a victory. Casualties aboard the *Wharton* were two men killed when a gun vent was not stopped properly, and none wounded. The *Austin* lost three killed, six severely wounded, and 17 slightly wounded. It was learned later from an Englishman who deserted the *Guadalupe* that his ship, completely riddled, had suffered 47 killed, 32 so wounded as to require amputation, and 64 badly wounded. The *Montezuma,* heavily damaged herself, lost 40 men killed or wounded.

Battle Witness

An interesting account of the second major battle off Yucatan is told in the journal of Midshipman George F.



The Schooner San Antonio *from an old drawing*

Fuller, aboard the flagship *Austin:*

"A curious experience is that which comes by being shot at from a long distance. One sees the flash of the gun, then hears the whistling of the ball, and then the report, the ball out-traveling the sound.

"After a little study of the coming balls one could determine very nearly where they were going to strike. Two of them I shall always remember. Of the first one I said, 'This is going to pick a man from my gun's crew.' It struck just under the port between wind and water. As it was jammed between two of the timbers it was found impossible to drive home a shot plug.

"The other shot which announced its intention to become intimate struck the deck of the topgallant forecastle directly over my head (for I was at gun No. 1) and tip-tip-tipped overboard, simply denting the planks. Walker, who was master's mate of the forecastle, looked over, and with his peculiar lisp, exclaimed, 'Fuller, that was devilish close.' "

End of the Navy

When the last shot was fired in the second engagement off Yucatan, the Texas Navy had engaged the enemy in mortal combat for the last time. The governments of Mexico and Yucatan, both tired and their treasuries emptied by the long struggle, made their peace. The Texas Navy sailed back to home ports and Commodore Moore for the next many months had a fight on his hands of a more personal nature. Besides being faced with a number of charges such as disobedience, neglect of duty, and misappropriation of funds, Moore was dishonorably discharged and relieved of command. Subsequent trials, however, cleared him of all charges.

As for the gallant Texas Navy, it found a permanent berth when it was absorbed in June, 1846, into the Navy of the United States.

A Visit to Baytown

Fascinated youngsters look at a working model which shows what takes place inside a 20-story-tall cat cracker. This demonstration is part of orientation lecture.

ON A sultry Friday afternoon early in June, 39 visitors gathered in the air-conditioned comfort of the Baytown Community House as the guests of Humble. While there, they heard a half-hour talk on the Company's refinery operations. Then they climbed aboard a chartered bus and rolled through the refinery gates to see first-hand the sprawling maze of pipes, towers and tanks from which emerge each day some quarter of a million barrels of petroleum products.

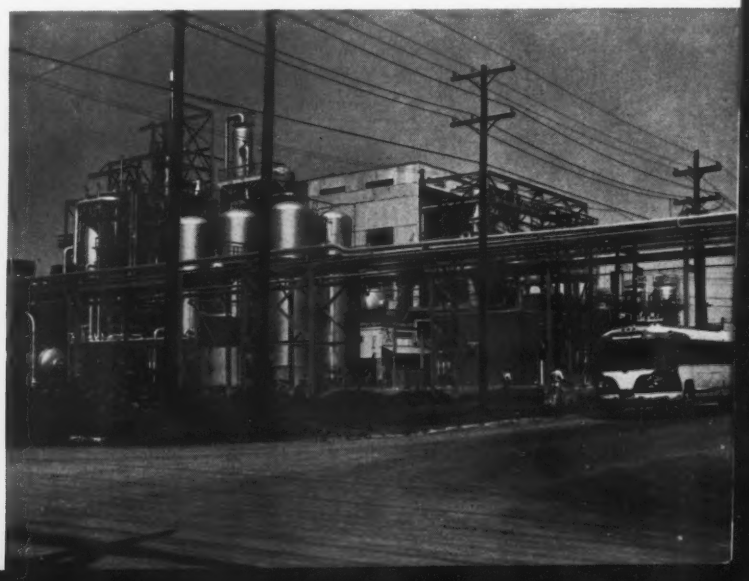
This brief excursion through one of the nation's largest refineries marked the resumption of the free guided tours through Humble's Baytown plants. Henceforth, according to the present schedule, similar public tours will be held every Friday at 2 p.m. and at other times by special arrangement.

Before they were suspended because of security restrictions during the Korean conflict, the Baytown tours attracted approximately 50,000 visitors over a two-and-a-half year period. More than a fourth of these sightseers came from the Baytown area. About 60 per cent came from the other parts of Texas, while the remainder hailed from the other 47 states and from 22 foreign countries.

The public tours have been resumed, Plants Manager Gordon L. Farned announced, in response to numerous requests to visit the refinery. Special tours for groups, such as schools or civic organizations, may be arranged on other days by writing to Mr. Farned at Baytown.

Time-out for refreshments. Visitors are offered souvenirs and cold drinks.

Visitors leave Community House and board bus for first public tour of Baytown Refinery since end of Korean conflict.



Tour route covers about six miles of refinery's streets. Brief stops are made at key units like this solvent dewaxing plant.

They have retired

Twenty employees, all with more than 20 years of service, join the ranks of Humble's annuitants

TWENTY Humble employees have retired since the last issue of the WAY. All of these new annuitants have 20 or more years' service with the Company. John W. Alston, engineer at Comyn Station, leads the group in length of service with 34 years to his credit. Five others of the group have over 30 years' service.

Basic information on the individual's Company career is given below in the following order: Name, job title and location, date of retirement, and number of years' service.

HUMBLE PIPE LINE COMPANY

PAUL R. ADAMSON, engineer at Pampa District, June 11—more than 26 years. Mr. Adamson was the first engineer to pump crude from the present Borger Station and the last engineer to leave the Burnett Steam Station. He spent his career with Humble at Burnett, Alanreed, Iowa Park, Childress, Odessa, and Pampa. He likes traveling and horse racing. During retirement, he hopes to sell insurance or used cars.

JOHN W. ALSTON, engineer at Comyn Station, May 3—more than 34 years. During his Company career, Mr. Alston served as pipeliner, oiler, engineer, and stock gauger. In 1920, while working in a connection gang, he was assigned the job of moving the campsite from Comyn when the big camp of approximately 500 employees was broken up. He is interested in truck gardening and fishing. He probably will live in Dublin, Texas, during retirement.

OLIVER T. BYRD, engineer at San Angelo Station, May 9—26 years. He was employed as a laborer at Comyn Station, later transferring to McCamey. He has been in San Angelo since 1950. Mr. Byrd recently purchased a home and three and a half acres at DeLeon, Texas, where he will pursue his hobby of gardening.

ELLIS C. MCFERRAN, SR., station foreman at Arp Station, June 7—almost 31 years. Before joining Humble, Mr. McFerran worked for the Standard Oil Company of Louisiana. He has served Humble at Navasota, Pierce Junction, Webster, Longview, and Arp. Up until the present time, he has been the only chief engineer at Arp Station. The station has operated continuously without lost-time accidents since it started in May, 1931. During retirement, he will engage in the greenhouse business at a location between Angleton and Freeport. His wife will work at ceramics on a commercial basis.

CALVIN E. HUBBLE, stock gauger at Baytown, June 22—more than 20 years. Mr. Hubble was employed at Webster; later he worked at Thompsons, Hull, Sugarland, Anahuac, and Baytown. He owns a home with three and a half acres in Highlands, Texas. He plans to live there and garden, fish, and travel.

JAMES M. MCLEROY, field gauger at Longview, May 10—27 years. Mr. McLeroy was employed at Sanders as a laborer. Later he worked at Corsicana, Mexia, Todd, Thompsons, Kilgore, Arp, London, and Longview. Woodworking is his hobby, and he likes to make odds and ends to use about the house. He owns a small workshop. During retirement, he plans to do a lot of reading and visiting with grandchildren in Houston and Bellaire.

WILLIAM H. TOMERLIN, engineer at Agua Dulce Station, March 18—more than 27 years. Mr. Tomerlin promises to be seen frequently in Baylor Stadium in the fall of the year during his retirement since he likes outdoor sports. He will purchase a home in Valley Mills, Texas, from which he will pursue his hobbies of fishing, hunting, and traveling. During his Company career, he served as oiler at McCamey Station. He operated the first diesel engine at Crane Station, getting the engine started about 11 o'clock one night in April, 1927, he reports.

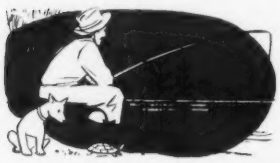
PRODUCTION DEPARTMENT

ABNER C. ASHLEY, pumper at Vernon District, March 16—almost 29 years. All of Mr. Ashley's service with Humble has been spent at Vernon, as a roustabout and pumper. Keeping up his yard is his special interest. He plans to move into the city of Vernon and live there during retirement.

LOUIS N. CARROLL, lease pumper-gauger at Tomball, April 27—almost 33 years. Mr. Carroll has worked for Humble in various capacities at Ranger, Olden, Breckenridge, Raccoon Bend, Kilgore, London Gas Plant, and a number of other locations. He owns his home in Tomball, where he will live and pursue his hobby of woodworking. He also plans to do some visiting with his children and other relatives.

AUGUSTINE K. CHOATE, lease pumper-gauger at London, May 23—more than 24 years. Mr. Choate is interested in history. He plans to visit old historical sites and delve into their details and background. He likes hunting and fishing, too, both of which he plans to work into his retirement routine. His service with the Company has been spent at Pyote, Luling, Arp, and London. He has been lease pumper-gauger since 1937.

JOHN T. STONE, lease pumper-gauger at Hawkins, May 1—more than 28 years. Mr. Stone was employed as a roustabout at Electra. Later, he worked at Wichita Falls, Kilgore, Gladewater, and Hawkins. He has been at Hawkins as a lease pumper-gauger since 1941. His special interests include gardening, flowers, and fishing.



ROY M. VAUGHAN, district chief clerk at London, June 1—more than 33 years. He was employed at Cisco as timekeeper. Later he worked as warehouseman, district transfer foreman, and district chief clerk. The last position he has held since 1949. He has been at London since 1936. Mr. Vaughan is looking forward to fishing on Cherokee Lake near Longview and being his own boss (with reservations on this score as far as Mrs. Vaughan is concerned, he adds).

BAYTOWN REFINERY

KNUTE ANDERSON, dockman helper, May 2—almost 24 years. Mr. Anderson worked with the Standard Shipping Company before joining Humble's Marine Department in May, 1930. It was in December, 1940 that he transferred to the Docks Department at Baytown Refinery, where he has served continuously since then except for a few months in Plant Protection. He owns a place at San Angelo, where he intends to raise a garden and chickens. He also plans to visit Sweden.

WILLIAM L. HANNA, helper, May 16—more than 27 years. He started in the Refinery as a boilermaker helper in the Boilermaker Department. Later he worked in Stills and Distillation Departments at various jobs. He has been in the Distillation group since 1936. He will enlarge on his special interests of gardening and bee-keeping during retirement.

RANDLE L. HUTSON, helper, May 4—more than 27 years. All of Mr. Hutson's service with the Company has been in the Pipe and Distillation Departments at the Refinery. He has been an active church member since 1907; at present he is a deacon and Sunday School teacher. He played or umpired on softball teams in Baytown from about 1936 to 1945. He plans to work in the church and take care of his home. He also expects to spend more time with his four children and seven grandchildren.

GEORGE MCLAIN, laborer, June 4—more than 33 years. He started in the Refinery as a teamster and worked there until May, 1951, when he transferred to the Electric Department. He will follow his hobbies of gardening and chicken raising.

JAMES W. MERCER, stillman first, April 30—more than 29 years. He worked in various departments at the Refinery until August 31, 1936, when he went to Cracking Coils as a stillman first helper. He remained there until his recent retirement as a stillman first. Mr. Mercer will stay at his home in Baytown and take care of his garden and yard.

ARTHUR L. SLAGLE, valve repairman, April 1—more than 30 years. Mr. Slagle was employed in the Pipe Department as a helper. He worked at various classifications before going to the Reclamation Department as a helper in September, 1936. He likes to visit with friends and neighbors and watch TV.

WALLACE A. STEPHENS, equipment cleaner pusher, April 22—more than 28 years. Mr. Stephens started to work for the Refinery as a helper in the Pipe Department. At the time of retirement, he was in the Labor Department. His special interests include fishing and gardening.

EUGENE W. WILLIAMS, guard, May 7—with almost 26 years. Mr. Williams began work at the Refinery in the Labor Department. He moved to the Pipe Department in September, 1927, and to the Plant Protection group as a guard on March 3, 1941. He will remain at his home in Baytown and follow his hobbies of gardening, reading and watching TV.

Deaths

Since the last issue of THE HUMBLE WAY, 15 active employees and eight annuitants have died.

Active employees who have died are: JOHN H. CALDWELL, 47, helper at Baytown Refinery, on April 14; WILLIAM P. DURHAM, 47, assistant to tank superintendent in Humble Pipe Line Company in the Houston Office, on April 17; VIRGIL D. FELTS, 60, engineer at Webster Station, on April 20; TRAVIS GANN, 51, engineer at Talco Station, on April 3; ALBERT GRASSMUCK, 47, fireman at Baytown Refinery, on May 18; ARLON A. HARTMAN, 24, junior accounting clerk in Production Accounting in the Houston Office on military leave, on May 15; WILLIE L. JONES, 49, operator helper at Baytown Refinery, on May 15; HUBERT W. KELSO, 56, field personnel man at Baytown Refinery, on April 29.

ELIJAH L. LENO, 46, laborer at Baytown Refinery, on April 17; THOMAS C. NICHOLS, 42, pipeliner at Cisco Connection, on May 14; EARL L. OTT, 48, farm boss at Grand Isle, on April 14; ALFRED D. PERRY, 53, pipeliner at Tomball Connection, on April 15; ELIGHE D. SMITH, 55, lease pumper-gauger at Tomball District, on May 1; ROSS L. SMITH, 46, district chief clerk at McCamey District, on May 21; ROWLAND S. J. WHEELER, 51, supervising civil engineer for Humble Pipe Line Company in the Houston Office, on May 24.

Annuitants: EDWARD H. BARZIZA, 55, intermediate accountant in Sales Accounting in the Houston Office before his retirement, died on April 24; DAVID M. BEARD, 62, engineer for Humble Pipe Line Company at Cisco before his retirement, died on April 27; CHARLES H. HODGES, 82, watchman at Anahuac District before his retirement, died on April 25; HENRY L. JACKSON, 71, lease pumper-gauger at Goose Creek District before his retirement, died on April 8; RUFUS M. MOORE, 62, roustabout at Vernon District before his retirement, died on May 15; EDWARD P. RANDLE, 68, pipeliner at Lytle Station before his retirement, died on May 23; WILLIAM E. A. SNOWDEN, 70, pumper at Avoca District before his retirement, died on May 26; DAVID F. WARREN, 81, chief engineer at Lytle Station before his retirement, died on May 18.

By the way . . .

WORLD'S DEEPEST OIL WELL

The deepest producing oil well in the world was completed by Humble in Iberia Parish, Louisiana, during the month of May.

It is the Rita Provost Minvielle No. 1, located on the northeast flank of the Weeks Island salt dome. Flowing through perforations from 16,834-16,844 feet through ⅛-inch choke, the well tested 410 barrels of 29.5 gravity oil per day with a gas-oil ratio of 974:1.

Deeper wells have been completed as gas or condensate producers but crude oil has never before been found at such a depth. The previous record-holder, in Kern County, California, was producing oil at 15,530 feet.

A deeper sand in the Humble well tested 347 barrels of 45.4 gravity condensate per day through perforations from 17,456-17,468 feet with a gas-condensate ratio of 19,683:1. Total depth of the hole was 17,637 feet.

Oil at a record depth.

HEADS JUNIOR ACHIEVEMENT

Mr. Rogers **Mr. Reistle**

C. E. Reistle, Jr., Humble's director in charge of production, has been elected president of Junior Achievement for the Houston area.

Mr. Reistle succeeds H. E. Rogers, a vice president of Hughes Tool Company, who has been named vice chairman of Junior Achievement's board of directors.

Junior Achievement is a national organization which offers boys and girls a chance to learn about our business system by actually operating small companies. Humble has sponsored a Junior Achievement company since 1946.

Last year 50 of these small companies were operated in Houston. The quota for next year is 60 companies.

PRODUCTION DEPARTMENT PROMOTIONS

Two promotions in Humble's Production Department were announced in May.

J. H. Galloway, assistant superintendent of the West Texas Division for the past four years, was named assistant manager of the Production Department to assist in handling field operations.

L. H. Byrd, production superintendent in Humble's California area, will succeed Mr. Galloway in the Midland post.

In his new assignment, Mr. Galloway will serve as one of three assistant managers in the Houston headquarters of Humble's Production Department. The other two are Bowman Thomas, in charge of engineering and staff work, and John O. Sue, in charge of natural gas.

J. H. Galloway

L. H. Byrd

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P. O. Box 2180, Houston 1, Texas

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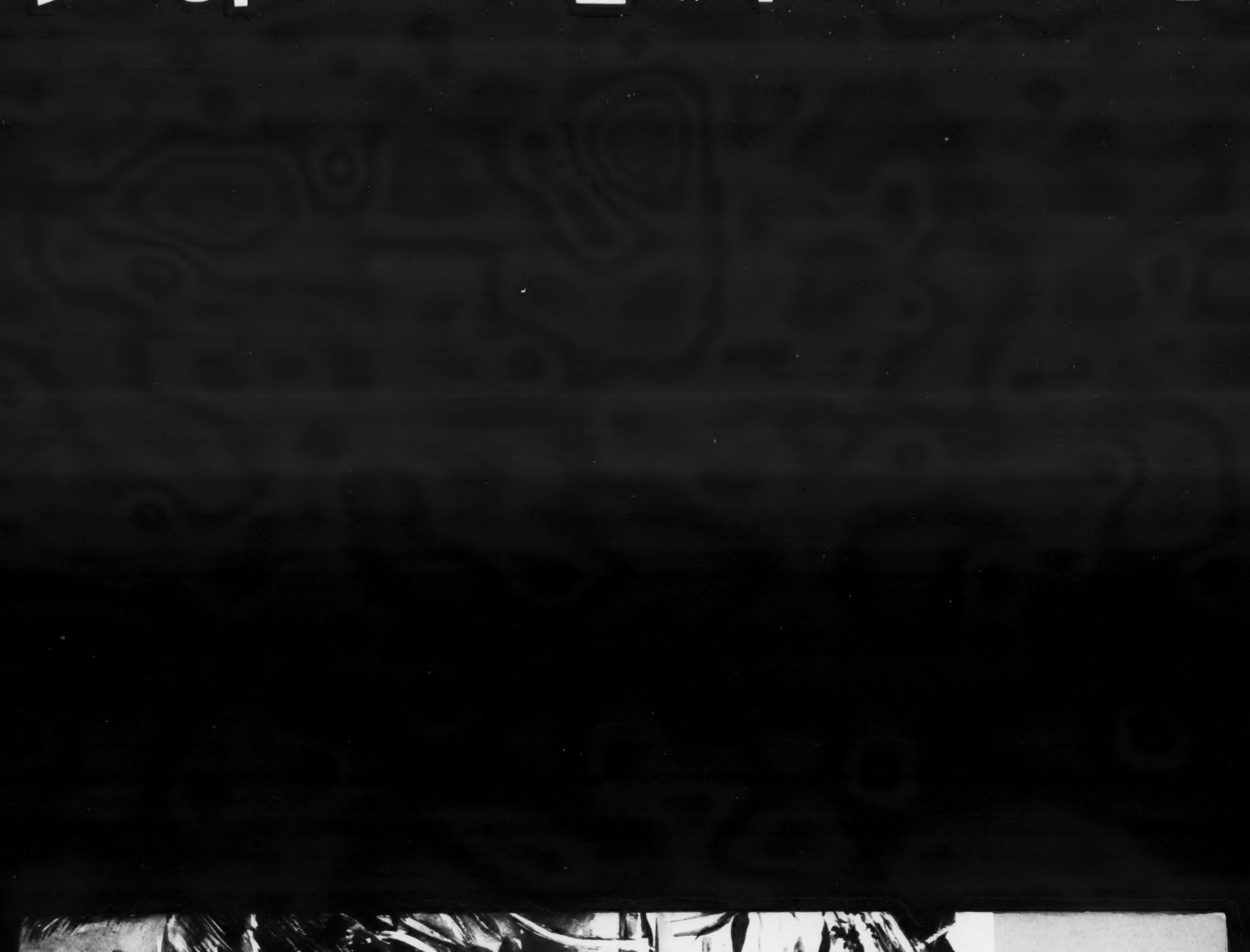
Seismograph crews often find their work goes agonizingly slow in the dank swamplands. (See "Oil Country Safari," Page 1.)

For this issue, E. M. Schiwetz has painted an artist's version of something that may have happened during the life of the second Texas Navy, whose story appears inside. Sailors from the flagship Austin, protected from the fierce tropical sun by broad-brimmed straw hats, are landing a small boat on the sandy beach of the Yucatan coast.

Hostilities broke out between Mexico and Yucatan during 1840. Supplying what it could in aid and comfort to the Yucatan cause, the Texas Navy established a base at the Arcas Islands, some 100 miles west of the port of Campeche.

In 1841, the Yucatan government made an agreement with President Mirabeau B. Lamar of Texas to rent the Texas Navy for $8,000 a month. Though most of the navy's activities in Yucatan waters have been described as "diplomatic cruising," two major sea battles were fought there with the Mexican fleet in 1843.